

U.S. Patent Application Serial No. 10/533,963
Amendment filed December 17, 2008
Reply to OA dated September 17, 2008

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1-3 (Canceled).

Claim 4 (Currently amended): A process for preparing inorganic fine particles, which comprises heating and applying impulse waves to a raw material liquid, wherein the concentration of neutralized hydroxides, neutralized coprecipitation hydroxides, hydrolyzates or composites thereof in the fine particles of the complex inorganic metal hydrate in the liquid is 5 to 50 % by weight,

wherein heating and application of impulse waves to said raw material liquid is conducted by contacting said raw material liquid with pulse combustion gas, and,

said pulse combustion gas has frequency range of 50 to 1000 Hz, pressure amplitude of at least $\pm 0.2 \text{ kg/cm}^2$, sound pressure of 100 to 200 decibel and contact gas temperature of 100 to 1000°C.

Claim 5 (Previously presented): The process for preparing inorganic fine particles of Claim 4, wherein said raw material liquid is a mixture of a solvent and an inorganic metal compound and/or a solution of an inorganic metal compound.

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Claim 6 (Original): The process for preparing inorganic fine particles of Claim 5, wherein said mixture of a solvent and an inorganic metal compound is a mixture of a solvent and an inorganic metal hydrate insoluble in said solvent and the obtained inorganic particles are fine particles of inorganic metal hydrate.

Claim 7 (Original): The process for preparing inorganic fine particles of Claim 6, wherein said mixture of a solvent and an inorganic metal hydrate insoluble in said solvent contains at least one of a slurry of zirconia hydrate fine particles, a slurry of ceria hydrate fine particles, a slurry of titania hydrate fine particles, a slurry of fine particles of a hydrated silicic compound and a slurry of alumina hydrate fine particles.

Claim 8 (Previously presented): The process for preparing inorganic fine particles of Claim 6, wherein said mixture of a solvent and an inorganic metal hydrate insoluble in said solvent comprises a neutralized hydroxide, a neutralized coprecipitated hydroxide, a hydrolyzate or a composite thereof.

Claim 9 (Previously presented): The process for preparing inorganic fine particles of Claim 6, wherein said fine particles of inorganic metal hydrate in said mixture of a solvent and an inorganic metal hydrate insoluble in said solvent are 0.01 to 50 μm .

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Claim 10 (Original): The process for preparing inorganic fine particles of Claim 5, wherein said solution of an inorganic metal compound is an aqueous solution of a water-soluble inorganic metal salt and the obtained inorganic particles are fine particles of inorganic metal salt or modifications thereof.

Claim 11 (Original): The process for preparing inorganic fine particles of Claim 10, wherein said aqueous solution of a water-soluble inorganic metal salt contains at least one of an aqueous solution of zirconyl chloride, an aqueous solution of zirconyl sulfate, an aqueous solution of zirconyl nitrate, an aqueous solution of cerium chloride, an aqueous solution of titanium tetrachloride, an aqueous solution of titanium trichloride, an aqueous solution of aluminum chloride, an aqueous solution of magnesium chloride, an aqueous solution of calcium chloride or an aqueous solution of a silicic compound.

Claim 12 (Previously presented): A process for preparing inorganic raw material powder, which comprises calcinating and pulverizing the inorganic particles obtained by the process of Claim 4.

Claim 13 (Withdrawn): An inorganic fine particle having a ratio of arithmetic standard deviation to arithmetic average size found from particle size distribution of secondary particle size measured by an optical method of at most 0.8.

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Claim 14 (Withdrawn): An inorganic raw material powder having a ratio of arithmetic standard deviation to arithmetic average size found from particle size distribution of secondary particle size measured by an optical method of at most 0.6.

Claim 15 (Withdrawn): The inorganic fine particle of Claim 13, wherein said arithmetic average size of secondary particles is 0.1 to 20 μm .

Claim 16 (Withdrawn): The inorganic raw material powder of Claim 14, wherein said arithmetic average size of secondary particles is 0.1 to 1 μm .